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UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH ADMINISTRATION
BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE
Division of Forest Insect Investigations

FOREST INSECT CONDITIONS IN CALIFORNIA - 1952

The following list of active centers of infestation has been prepared by the Berkeley Forest Insect Laboratory from reports received from its survey personnel and many private, state and federal cooperators. The over-all level of loss throughout the forested area of California remains about the same as last year. However, there has occurred a striking change from heavy pine killing to heavy loss in the true fir belt. The current rate of fir killing is the greatest since the 1929 - 1933 period when some stands lost 50 percent of their fir volume. Losses in pine are generally at an endemic level except in eastside stands of the Lassen and Plumas National Forests, southern California, and somewhat scattered local areas. Areas of above normal loss which have been brought to our attention are:

I. NORTH COAST SUBREGION

1. CEDAR STOCK FARM. Trinity County, near Minersville.

Scattered killing of ponderosa pine around the edge of Cedar Stock Ranch was detected during mid-summer. The attacked trees were mostly young and contained the western pine beetle and Ips engraver beetles. Almost every year this type of killing can be found to be aggressive locally in various parts of the pine region. These conditions usually improve rapidly.

ACTION: No control. Under surveillance.

2. WHITE ROCK GUARD STATION. Trinity County.

Extensive groups of dead young and old ponderosa pine showed up this year along the east fork of the south fork of the Trinity River. The infestation has definitely increased in severity from recent years.

ACTION: No control action, pending ground check.

3. MAD RIVER. Trinity County.

Pine bark-beetle loss reported by the Trinity National Forest in mixed conifer stands in the upper Mad River drainage is approaching an epidemic level. Especially severe damage is evident in T13, R6E, H. M.

Small size adm. sale.

ACTION: Control recommended. Sale of infested material planned by Forest Service.

4. GOAT MOUNTAIN. Colusa, Lake Counties.

Concentrated killing of ponderosa pine by the western pine beetle and pine engraver beetles continues on the slopes of Goat Mountain. The problem has persisted for several years on private land in the vicinity of a logging operation. The activity of the Ips beetles would indicate that the continuation of the infestation is tied in with cutting practices in the area.

ACTION: No control action pending ground check of status of over-wintering portion of outbreak.

5. LAKE PILLSBURY. Mendocino, Lake Counties.

This is an area which experienced unusually severe snowbreak last winter in young ponderosa pine and Douglas fir. It was feared that a large infestation in the injured trees would result in heavy loss this summer. However, a serious outbreak does not appear to have materialized, although the period of danger has not passed inasmuch as many trees continue to live in an extremely weakened condition.

ACTION: No control. Under surveillance.

6. BOGGS MOUNTAIN RECREATION AREA. Lake County.

The timber in this area of heavy recreational use has received control attention during recent years. High local interest has developed in protecting the scenic value surrounding the numerous resorts. Efforts have been started toward forming a county insect control district by which treatment of all ownership would be assured.

ACTION: Maintenance control by the California Division of Forestry, in cooperation with private owners. Direct control

II. EASTSIDE SIERRA (north) SUBREGION

7. EAGLE ROCK AND GARNER ROCK AND GARNER MOUNTAIN. Siskiyou County.

Increased tree killing is evident in these two areas of recent windthrow.

ACTION: No action, pending ground check.

8. MILLER MOUNTAIN. Siskiyou County.

A heavy infestation by the western pine beetle is evident from U. S. Highway 97 on the east slope of Miller Mountain.

ACTION: No action, pending ground check.

9. COONROD FLAT. Siskiyou County.

Ponderosa pine planting stock were killed again this year by grasshoppers following planting. Successful establishment of a plantation here appears dependent upon control of this insect.

ACTION: No control next season because further planting is not planned for the near future.

10. NORTH WARNER MOUNTAIN. Modoc County.

Spruce budworm has been found here defoliating white fir and lodgepole pine. Heavy defoliation of occasional trees was observed.

ACTION: No control. Under surveillance.

11. SUGAR HILL PINE PLANTATION. Modoc County. A small defoliating moth has been detected working on the plantations on the westside of Sugar Hill. Identification is still uncertain.

ACTION: This is a new problem. Action requires additional knowledge of insect identity and habits. Constant watching of the area is essential.

12. PINE CREEK, SOUTH WARNER MOUNTAINS. Modoc County.

Pine loss in this area is the heaviest of the current year on the Modoc National Forest.

ACTION: No control action, pending ground check.

13. CAYTON VALLEY. Shasta County.

Rather serious killing by a flatheaded borer developed this year in reserve Douglas fir as a result of heavy windthrow in this area during the past two winters.

ACTION: Salvage logging by the Shasta Forests Company is in progress.

14. HAT CREEK RIM. Shasta County.

Large groups of ponderosa and Jeffrey pine have been killed following a buildup of bark-beetle populations in last year's windthrown trees. A salvage operation of windthrown trees has been underway in the area for over a year, but there still remain many windthrows still not salvaged which have produced heavy bark-beetle broods. The failure to salvage the material while it was still infested is believed responsible for the serious outbreak which has developed in the local area. This infestation is characterized by large groups containing as many as 40 merchantable trees.

ACTION: Ground checking and an appraisal survey needed, but indications are that a tighter program of control through the salvage of infested trees will be the method recommended.

(15) BOGARD - POISON LAKE - HALLS FLAT - BEAVER CREEK. Lassen County.

Losses in old-growth ponderosa and Jeffrey pine in this very extensive area are heavier than at any time in the past 20 years. A marked increase in infested trees has taken place since last year. A tendency for the killing to occur in groups reflects the epidemic nature of the outbreak.

ACTION: Full recommendations concerning control will be formulated following ground checking to determine further details of the extent and nature of the infestation. A greatly accelerated program of salvaging brood-laden trees is in prospect.

(16) CAL-CONE MOUNTAINS. Lassen County.

The expanse of virgin pine timber running from Poison Lake to the edge of cutover on Harvey Mountain has, in recent years, displayed continually increasing loss. An effective program of removal of infested and high risk pine has been planned for the next two years. However, limitations imposed by the maximum annual cut will make it necessary to delay logging in the Cal-Cone Mountains portion of this area until 1954. Therefore, to forestall continued losses, salvaging of infested trees was undertaken this fall on approximately 6000 acres containing an average infested volume of 165 board feet per acre. 40 MM. will be cut by semi-sal.

ACTION: Salvage logging of infested trees is in progress.

(17) THOMPSON PEAK. Plumas County.

The largest single concentration of the Jeffrey pine beetle ever recorded is centered in 20,000 acres in the drainage west of Thompson Peak. Sampling indicates that there is an average of 185 board feet per acre of presently infested trees. Extension of the infestation is occurring in the neighborhood of abandoned trees. Groups containing as many as 30 currently infested trees have been observed. Because of the extraordinarily aggressive nature of the beetle activity and the presence of nearly pure Jeffrey pine, great danger exists to the remaining stand.

ACTION: A project involving complete spotting and subsequent removal of infested trees by logging is in progress jointly by the U. S. Forest Service, the California State Division of Forestry and the private landowner (Clover Valley Lumber Co.).

(18) CRYSTAL BAY. Lake Tahoe, Nevada.

The infestation of second-growth ponderosa pine by the mountain pine beetle on this privately owned land has been reported for the past two years. Efforts made to interest the owner in control following initial detection were unsuccessful. It appears that killing is about the same as last year. This sustained epidemic has resulted in the depletion of as much as 85 percent of the stand in localized areas in the last three years.

ACTION: No control; continue surveillance.

19. LATOUR STATE FOREST. Shasta County.

A generally good picture throughout the forest is blemished by a number of miscellaneous local infestations. The current upswing of Scolytus activity over the State is being reflected on a small scale here. Light killing by the mountain pine beetle in cutover and some activity by Ips beetles was noted this summer.

ACTION: No control. Area is continually under surveillance by the State Division of Forestry who will apply control where conditions develop that warrant it.

(20) WALKER FOREST. Shasta County.

Killing by the Douglas-fir beetle has subsided near Viola where salvage logging was directed into spectacular group killing last winter. However continued aggressiveness by this beetle is evident in several areas which did not receive control treatment.

ACTION: Control through salvage logging of infested trees is recommended and planned for this winter.

(21) LASSEN VOLCANIC NATIONAL PARK. Shasta County.

Over-wintering broods of the Jeffrey pine beetle in the Jeffrey pine around the Manzanita Lake and Lost Creek areas are at a higher level than during the past ten years. Killing around Butte Lake by the western pine beetle also is increasing.

? ACTION: Maintenance control through salvage logging of brood-laden trees, an approach new to National Park areas, has been recommended and is in progress.

22. LOST CREEK. Shasta County.

An outbreak of the Jeffrey pine beetle in timber on National Forest land adjacent to Lassen National Park has gained rapidly in momentum in recent years. The faded trees, visible from the Park highway, detract from the scenery and the broods from them are believed to contribute toward re-infesting nearby areas within the Park.

? ACTION: Control action in the form of salvaging infested trees has been recommended and is in progress.

23. HUMBUG MEADOW. Plumas County.

A rather minor infestation by the western pine beetle and pine engravers evidenced itself last summer in a narrow band along the north edge of the meadow west of Longville. Many of the trees have been only topkilled and are expected to survive unless the lower portion of the stems become attacked by the western pine beetle. The general trend toward lower insect populations in this area makes such danger seem remote.

ACTION: No control. Area should be watched to detect any increase in activity.

(24) BUTTE MEADOWS. Tehama County.

Topkilling in old and young ponderosa pine is causing concern in the Butte Meadows area. Western pine beetles, attacking in association with Ips, have killed a number of trees near areas of recent logging activity.

ACTION: Salvage logging is recommended for currently infested trees and those with one-half of their crowns killed and which may become breeding sources and foster further infestations.

25. QUINCY. Plumas County.

Summer fades were quite abundant on mixed ownership north of Quincy this year. The western pine beetle was responsible for the killing which was confined to ponderosa pine.

ACTION: No control. Area should be watched to detect renewal of activity.

(26) LA PORTE. Plumas County.

Severe defoliation of white fir on an area of nearly 2000 acres occurred last summer. Investigation disclosed that a sawfly was responsible. Nothing as serious as this had ever been attributed to this insect. The affected area is composed mainly of rather young white fir with an admixture of other species such as red fir which so far appear to be immune to attack. Large numbers of adults emerged and layed their eggs in October, indicating that equally heavy defoliation can be expected next summer.

ACTION: This is an entirely new problem in California. Similar outbreaks with other species of sawflies in other parts of the country have often passed rapidly. Study of the insect's biology should be undertaken by the Berkeley Forest Insect Laboratory as a prerequisite to a formulation of control recommendations. Experimental control, presumably by aerial application of insecticide, should precede any attempt at large scale control.

(27) CHALLENGE. Yuba County.

Heavy snowbreak in young ponderosa pine stands in this vicinity last winter was followed early this summer by large buildups in western pine beetle and Ips populations. Attacks were confined mostly to injured trees. It appears that there has not been any serious invasion by subsequent generations of beetles into undamaged trees.

ACTION: Control through logging of snow-damaged and infested trees was conducted in some of the area last summer. Further operations of this nature are encouraged but the beetle activity appears to be falling off generally of its own accord.

28. DOWNIEVILLE. Sierra County.

Groups of pole-size sugar pine were reported to be dying from insect attack last summer in recent cutover north of Downieville. The aggressive nature of the infestation indicates that the conditions favorable to large populations of the mountain pine beetle prevail in this area as in several other westside localities.

ACTION: No control action, pending examination of the infestation.

29. HARMONY RIDGE. Nevada County.

Accelerated injury and killing in young ponderosa pine by pine engravers was reported this year in the area around Harmony Ridge. Much of the trouble appears to stem from last winter's snowbreak.

ACTION: No control. Area should be observed for any further activity.

30. ROBBS PEAK. Eldorado County.

Aerial observations made in October indicate that a rather intense outbreak of bark beetles in a basin to the east of Robbs Peak Lookout.

ACTION: No control action, pending a ground check of the area.

31. PLACERVILLE. Eldorado County.

The various conifers growing at the Institute of Forest Genetics for use in experimental work constitute a large investment in time and money. Replacement of any of these trees, should they be destroyed by insects, might not be possible, or at best would require many years. The danger of insect attack has been lessened in recent years by a program of reducing beetle populations surrounding the Institute grounds.

ACTION: Maintenance control through fell-peel-burn treatment of all infested trees within two miles of the Institute.

IV. WESTSIDE SIERRA (south) SUBREGION.

32. SANDS MEADOW. Tuolumne County.

Very heavy killing of ponderosa pine by the western pine beetle has been detected in the area south of Sands Meadow. Winter snowbreak appears responsible for most of the infestation.

ACTION: No control action, pending examination of the outbreak from the ground.

33. YOSEMITE NATIONAL PARK. Tuolumne, Mariposa Counties.

Steadily increased use of the Park by vacationists makes the protection of these old-growth stands a basic policy. Bark-beetle caused loss appears to be at a rather low level, the campground and grove areas being

the points of main concern. Lodgepole stands at higher elevations show serious initial defoliation by larvae of the lodgepole needle-miner. Heavier damage appears to be in prospect in these stands as the larvae complete their feeding next summer.

ACTION: Maintenance control of bark beetles, mainly through use of the fell-peel-burn method. Investigation should be made of the extent of damage and of methods of controlling the lodgepole needleminer.

(34) MIAMI CREEK. Mariposa, Madera Counties.

Toxic-oil sprays proved effective last spring in controlling a new type of infestation of the mountain pine beetle in 50-year-old sugar pine. Sampling indicates that a 60-percent reduction in numbers of infested trees was obtained. However, in view of the extreme aggressiveness of the original outbreak, it is advisable to resort to a program of control this fall to clean up the remaining infested trees. The cause of the tree-killing appears related to overcrowded stand conditions. Direct control of beetle populations should provide temporary relief to the situation but a long-term solution is possible only through management practices aimed at improving stand conditions.

ACTION: Control this fall using toxic-oil sprays has been recommended and is underway.

(35) BEASORE CREEK. Madera County.

Heavy killing of Jeffrey pine occurs along three miles of the east side of Beasore Creek. Attacks by the Jeffrey pine beetle here and elsewhere have been aggressive, indicating that conditions favoring outbreaks of this beetle prevail generally throughout the host range. Additionally, killing of lodgepole pine by the mountain pine beetle was reported on 80 acres in this vicinity.

ACTION: No control action, pending ground appraisal of amount and status of loss.

36. BLUE CANYON. Fresno County.

Losses from western pine beetle and Ips attacks have persisted for many years in Blue Canyon which is located in the fringe of the pine type. This fall, faded trees are again quite plentiful.

ACTION: No control action pending examination of infestation.

(37) SEQUOIA-KINGS CANYON NATIONAL PARKS. Fresno, Tulare Counties.

Although a complete accounting of trees infested with over-wintering broods of bark beetles is not possible until late winter, conditions appear generally good. The bulk of loss is expected to show up in ponderosa pine in Cedar Grove and in over-mature sugar pine in several of the Sequoia groves. The desirability of protecting these areas is emphasized by the large number of visitors enjoying them annually.

ACTION: Maintenance control in accordance with Park policy of keeping bark-beetle populations at an irreducible minimum.

(35) TEHACHAPI MOUNTAIN. Kern County.

Very heavy killing of white fir by the fir engraver beetle was reported this year on private land south of Tehachapi. This report bolsters others received which indicate current white-fir killing is the heaviest the State has experienced in some twenty years. The loss in the Tehachapi area is located in all aged trees and is heaviest at lower elevations. Five to ten dead trees per acre are common.

ACTION: Previous study indicates that successful control of this beetle requires more additional knowledge than is now available.

V. EASTSIDE SIERRA (south) SUBREGION

39. REDS MEADOW. Devils Postpile National Monument.

The pleasant shade and protection afforded campers in the Devils Postpile area is being destroyed steadily by the death of lodgepole pine from attacks of the mountain pine beetle. There is some evidence to support the belief that the beetles are attracted to trees in the campgrounds by smoke from campfires. At present, it is believed that best protection of remaining trees is possible through maintaining beetle populations at a minimum level by annual control.

ACTION: Maintenance control aimed at keeping mountain pine beetle numbers at an irreducible minimum.

Forest Insect Laboratory
Berkeley, California
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VI. SOUTHERN CALIFORNIA SUBREGION

Project Area	Location	Acreage	Insect Species 1/	Host	Status 2/	Recommended [illegible]
LOS PADRES						
Figueroa Mtn.	Santa Barbara Co.	1500	Db	PP-CP	+	Maintenance [illegible]
Mt. Pinos	do	2500	"	PP	+	do
Big Pine Mtn - Madulce	do	2000	Db-Ips	PP	+	Salvage plus direct control
Pine Mtn.	do	1000	Db-Ips	"	+	do
Alamo Mtn.	do	1500	"	"	+	Salvage, if possible
ANGELES						
Charlton-Chilao	Los Angeles Co.	1600	Db-Ips	PP-CP	-	Maintenance [illegible]
Crystal Lake	do	1000	"	PP	+	do
Barley Flats	do	700	Db	PP-CP	0	Recommend no [illegible]
Big Pine	do		F.H.,Dv	J.P.	0	Salvage, if [illegible]
SAN BERNARDINO						
Crestline-Arrowhead	San Bernardino Co.	15,000	Db-Ips	PP-CP	+	Maintenance & Salvage if [illegible]
San Jacinto-Idyllwild	Riverside Co.	14,500	"	"	-	do
Barton Flats	San Bernardino	7,500	Db-Dj	PP-JP	+	Sanitation Sal[illegible] and direct con[illegible]
CLEVELAND						
Corte Madera	San Diego Co.	1,600	Db	PP-CP	0	Maintenance
Laguna Mtn.	do	10,000	Db-Ips	"	0	do
Palomar Mt.	do	2,000	"	"	+	Direct control
Julian-Cuyamaca	do	7,000	"	"	+	Salvage and dir[illegible] control

1/ Db = Western pine beetle
Dj = Jeffrey pine beetle
F.H. = Flatheaded wood borer
D.v. = Red turpentine beetle
Ips = Pine engraver beetle

2/ + = Infestation increasing
0 = Infestation static
- = Infestation diminishing

Sou Calif. Conservation Assn.